

Ship Oct 15

Dart Aerospace Ltd.

Date: Friday, 9/21/2007 1:18:54 PM  
User: Kim Johnston

# Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : GPS RECEIVER HOUSING  
Job Number : 34822  
Estimate Number : 12494  
P.O. Number : N/A Part Number : D35147  
This Issue : 9/21/2007 S.O. No. : N/A Drawing Number : UNDER REVIEW D3514  
Prsht Rev. : NC Project Number : N/A  
First Issue : 9/21/2007 Type : SMALL /MED FAB Drawing Revision : N/A 10/09/24 BE  
Previous Run : 33305 Material : N/A  
Written By : Due Date : 10/12/2007 Qty: 5 Um: Each  
Checked & Approved By :  
Comment : Est Rev:A New Issue 06-07-26 JLM

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M6061T6S040 6061-T6 .040 Sheet



Comment: Qty.: 0.2518 sf(s)/Unit Total : 1.2590 sf(s)  
6061-T6 .040 Sheet  
(M6061T6S040)  
Batch: M102723 IB 07-10-1

2.0 WATER JET FLOW WATER JET



Comment: FLOW WATER JET  
1-Cut as per Dwg D3514  
Dwg Rev: A IB 07-10  
Prog Rev: A

(5)

\*\*\*Ensure Grain Direction is correct\*\*\*\*\*

2-Deburr if necessary IB 07-10-1

3.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

IB 07-10-1

4.0 QC8 SECOND CHECK



Comment: SECOND CHECK

IB 07/10/02 (5) Counts

5.0 BRAKE NC NC BRAKE



Comment: NC BRAKE  
Form Joggle as per Dwg D3514

IB 07/10/08

(5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DD Date: 7/1/12  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 9/21/2007 1:18:54 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: GPS RECEIVER HOUSING

Job Number: 34822

Part Number: D35147

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



count

Comment: INSPECT WORK TO CURRENT STEP

5 07/10/10

(5)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

MF

07-10-10

(5)

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

MF

07-10-11

(5)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: GA -

MF

07-10-11

(5)

10.0

QC21

FINAL INSPECTION/W/O RELEASE



(5)

Comment: FINAL INSPECTION/W/O RELEASE

07/10/10

Job Completion



07-10-12

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

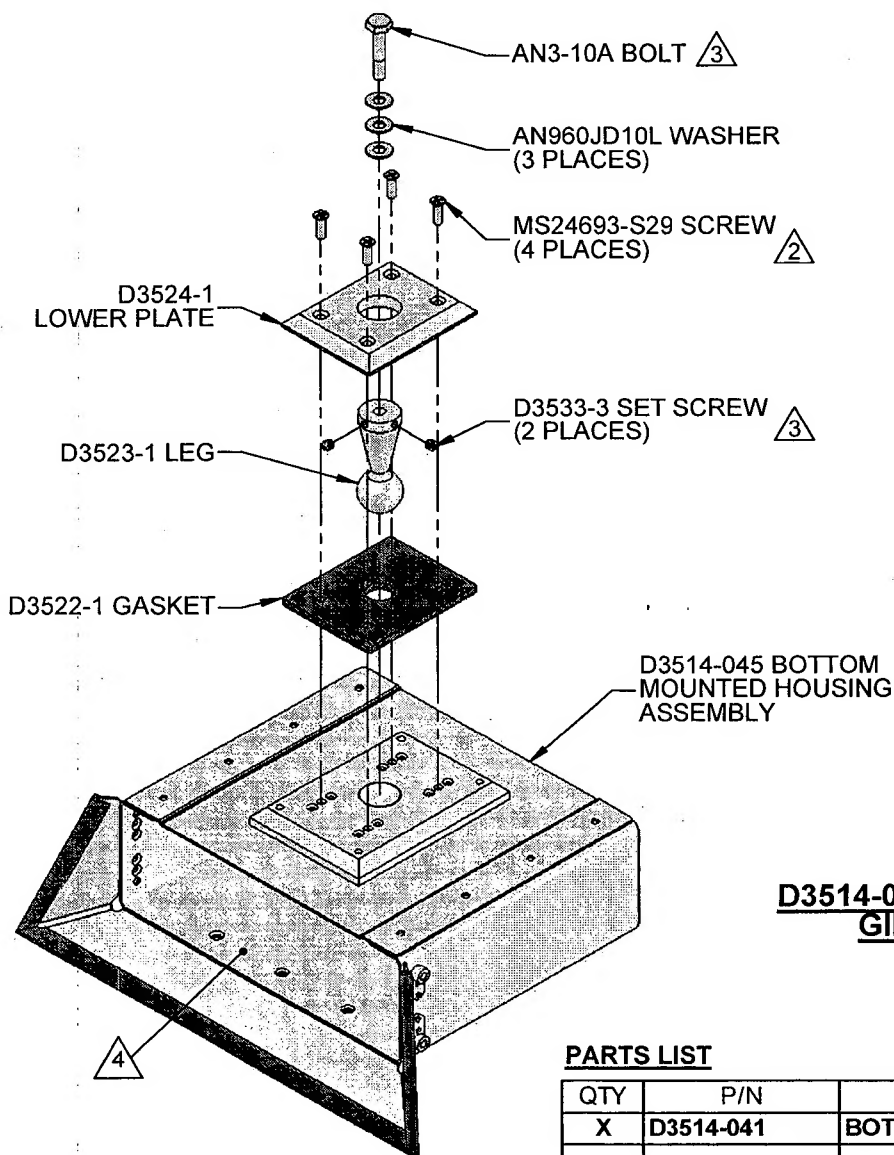
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED [Signature]	DRAWING NO. D3514	REV. A SHEET 1 OF 9
DATE 07.06.18	TITLE GPS RECEIVER HOUSING		SCALE 1:3
REV A	DATE 07.06.18	DESCRIPTION NEW ISSUE	



RELEASED  
07.08.03

**D3514-041 BOTTOM MOUNTED  
GIMBAL ASSEMBLY**

SHOP COPY  
RETURN TO  
ENGINEERING  
CONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**PARTS LIST**

QTY	P/N	DESCRIPTION
X	D3514-041	BOTTOM MOUNTED GIMBAL ASSEMBLY
1	D3514-045	BOTTOM MOUNTED HOUSING ASSEMBLY
1	D3522-1	GASKET
1	D3523-1	LEG
1	D3524-1	LOWER PLATE
2	D3533-3	SET SCREW
1	AN3-10A	BOLT
3	AN960JD10L	WASHER
4	MS24693-S29	SCREW

**NOTE:**

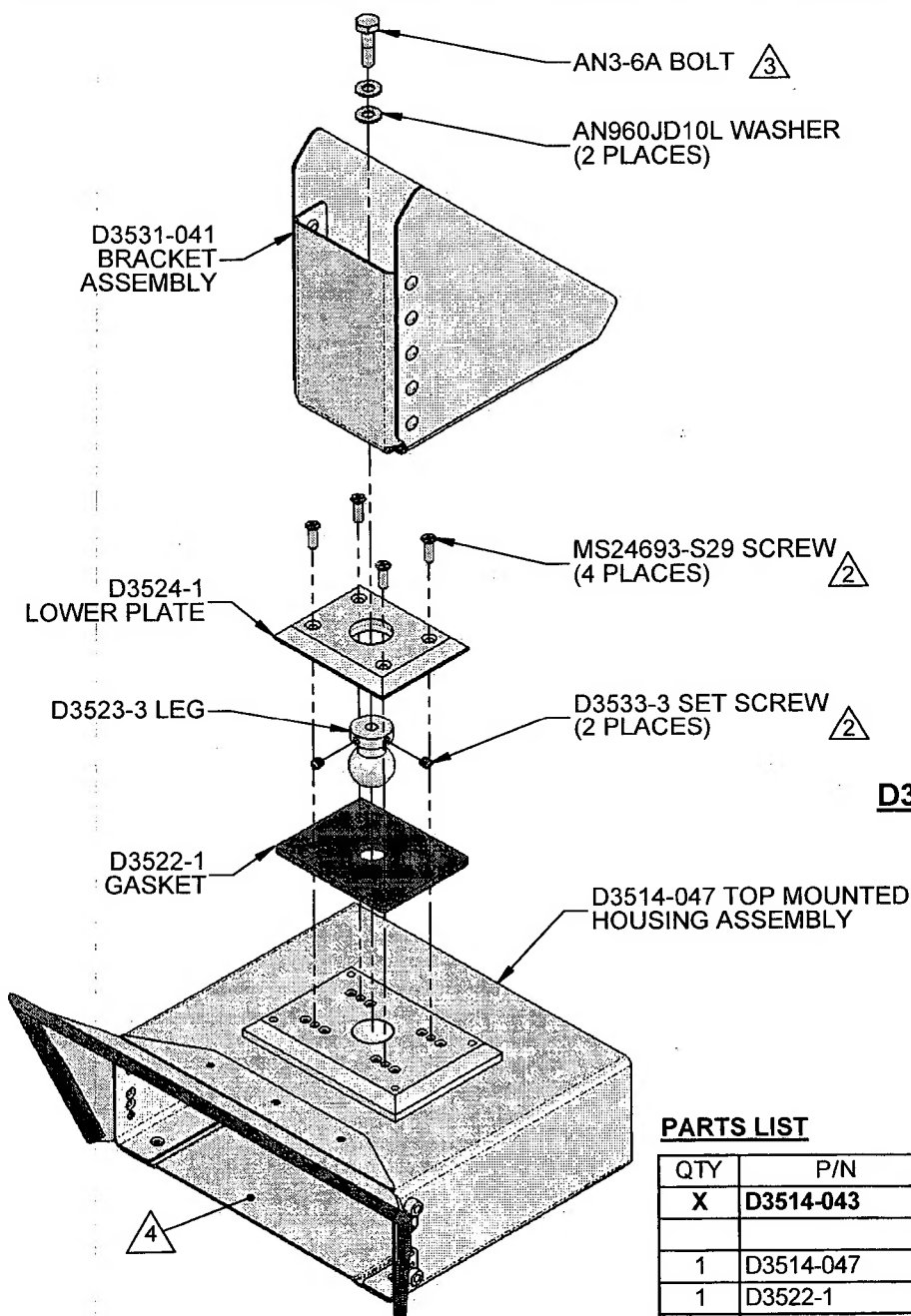
- 1) ASSEMBLE PER DART QSI 003
- 2) TORQUE SCREWS TO 5-6 in-lbs
- 3) TIGHTEN TO SNUG FIT ONLY
- 4) IDENTIFY WITH DART P/N "D3514-041" USING A WHITE MARKER ON THE INSIDE OF THE HOUSING ASSEMBLY WHERE INDICATED

COPYRIGHT © 2007 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <b>CB</b>	DRAWN BY <b>CB</b>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED <b>LE</b>	APPROVED <b>[Signature]</b>	DRAWING NO. <b>D3514</b>
DATE <b>07.06.18</b>	TITLE <b>GPS RECEIVER HOUSING</b>	REV. A SHEET 2 OF 9 SCALE 1:3



**RELEASED**  
07.08.03

**D3514-043 TOP MOUNTED  
GIMBAL ASSEMBLY**

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**PARTS LIST**

QTY	P/N	DESCRIPTION
<b>X</b>	<b>D3514-043</b>	<b>TOP MOUNTED GIMBAL ASSEMBLY</b>
1	D3514-047	TOP MOUNTED HOUSING ASSEMBLY
1	D3522-1	GASKET
1	D3523-3	LEG
1	D3524-1	LOWER PLATE
1	D3531-041	BRACKET ASSEMBLY
2	D3533-3	SET SCREW
1	AN3-6A	BOLT
2	AN960JD10L	WASHER
4	MS24693-S29	SCREW

**NOTE:**

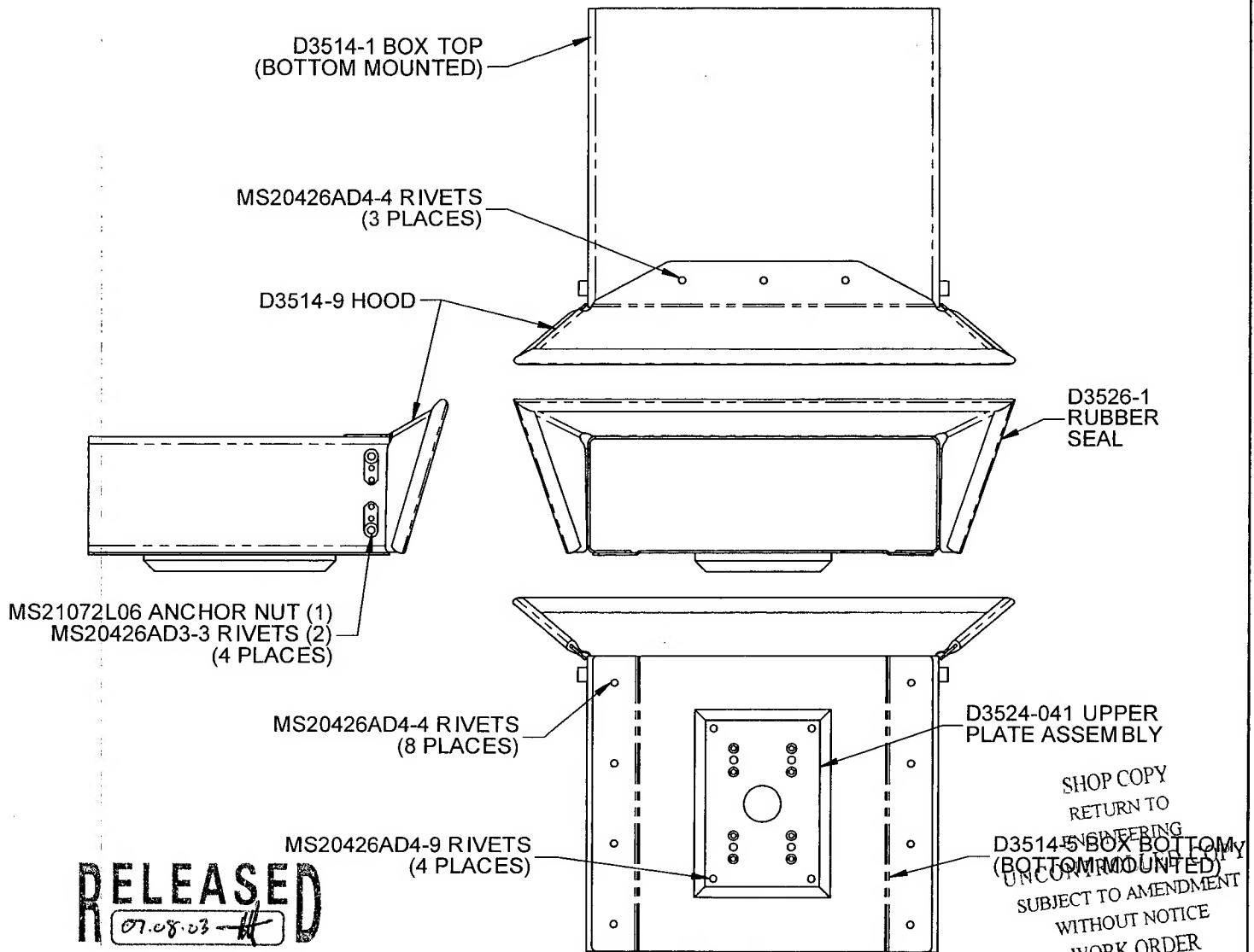
- 1) ASSEMBLE PER DART QSI 003
- 2) TORQUE SCREWS TO 5-6 in-lbs
- 3) TORQUE BOLTS TO 15-25 in-lbs
- 4) IDENTIFY WITH DART P/N "D3514-043" USING A WHITE MARKER ON THE INSIDE OF THE HOUSING ASSEMBLY WHERE INDICATED

**COPYRIGHT © 2007 BY DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <b>CB</b>	DRAWN BY <b>CB</b>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <b>LE</b>	APPROVED <b>#</b>	DRAWING NO. <b>D3514</b>	REV: A SHEET 3 OF 9
DATE <b>07.06.18</b>		TITLE <b>GPS RECEIVER HOUSING</b>	SCALE 1:3



SHOP COPY  
RETURN TO  
ENGINEERING  
D3514-5 BOX BOTTOM  
(BOTTOM MOUNTED)  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

### D3514-045 BOTTOM MOUNTED HOUSING ASSEMBLY

#### NOTES:

- 1) POWDER COAT ASSEMBLY BLACK  
SANDTEX (4.3.5.7) PER DART QSI 005 4.3.
- 2) ASSEMBLE PER DART QSI 003

#### PARTS LIST

QTY	P/N	DESCRIPTION
X	D3514-045	BOTTOM MOUNTED HOUSING ASSEMBLY
1	D3514-1	BOX TOP (BOTTOM MOUNTED)
1	D3514-5	BOX BOTTOM (BOTTOM MOUNTED)
1	D3514-9	HOOD
1	D3524-041	UPPER PLATE ASSEMBLY
1	D3526-1	RUBBER SEAL
8	MS20426AD3-3	RIVET
11	MS20426AD4-4	RIVET
4	MS20426AD4-9	RIVET
4	MS21072L06	ANCHOR NUT

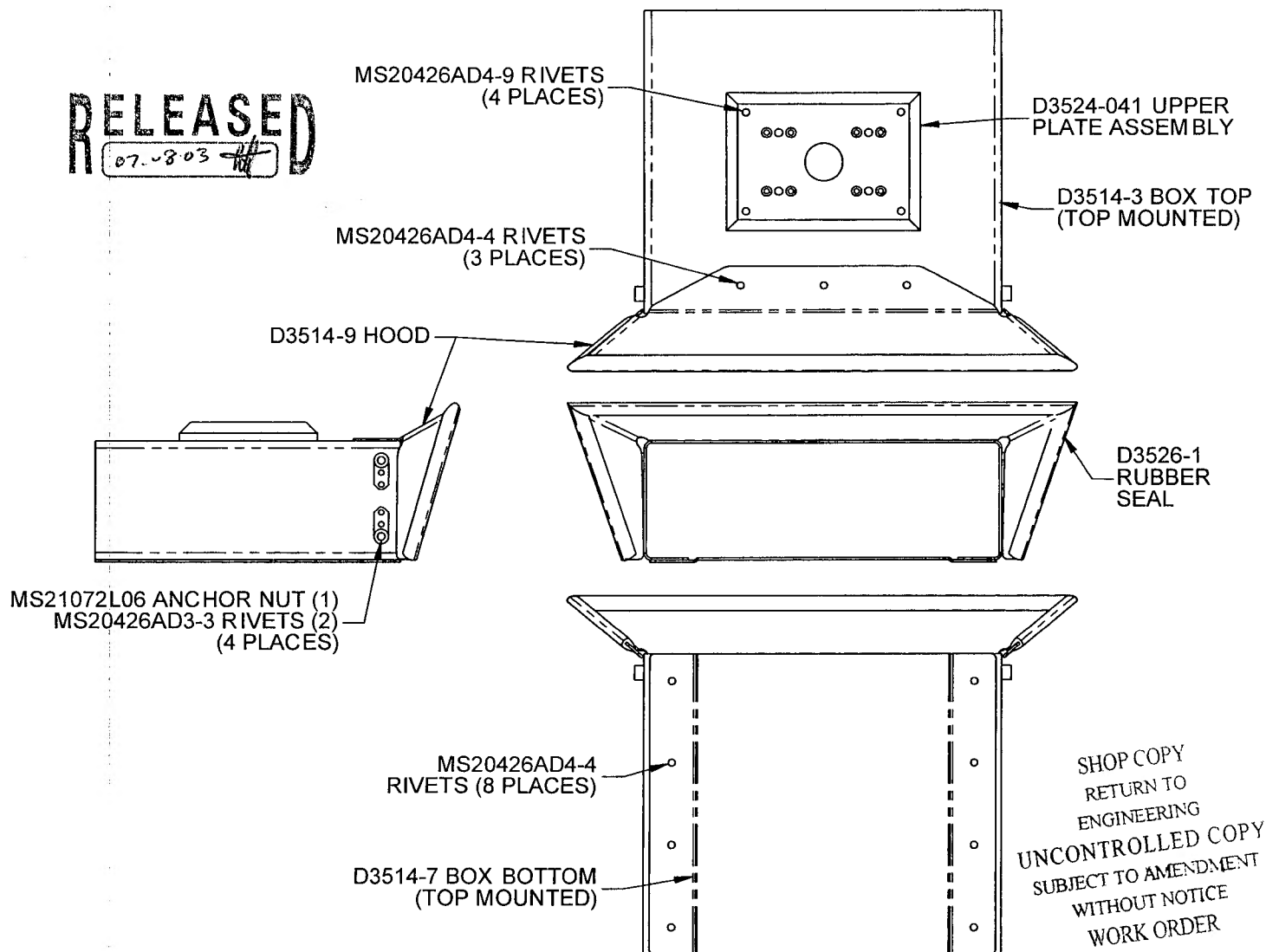
COPYRIGHT © 2007 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED [Signature]	DRAWING NO. D3514	REV. A SHEET 4 OF 9
DATE 07.06.18		TITLE GPS RECEIVER HOUSING	SCALE 1:3

RELEASED  
07.08.03



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**D3514-047 TOP MOUNTED  
HOUSING ASSEMBLY**

**NOTES:**

- 1) POWDER COAT ASSEMBLY BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3.
- 2) ASSEMBLE PER DART QSI 003

**PARTS LIST**

QTY	P/N	DESCRIPTION
X	D3514-047	TOP MOUNTED HOUSING ASSEMBLY
1	D3514-3	BOX TOP (TOP MOUNTED)
1	D3514-7	BOX BOTTOM (TOP MOUNTED)
1	D3514-9	HOOD
1	D3524-041	UPPER PLATE ASSEMBLY
1	D3526-1	RUBBER SEAL
8	MS20426AD3-3	RIVET
11	MS20426AD4-4	RIVET
4	MS20426AD4-9	RIVET
4	MS21072L06	ANCHOR NUT

COPYRIGHT © 2007 BY DART AEROSPACE LTD

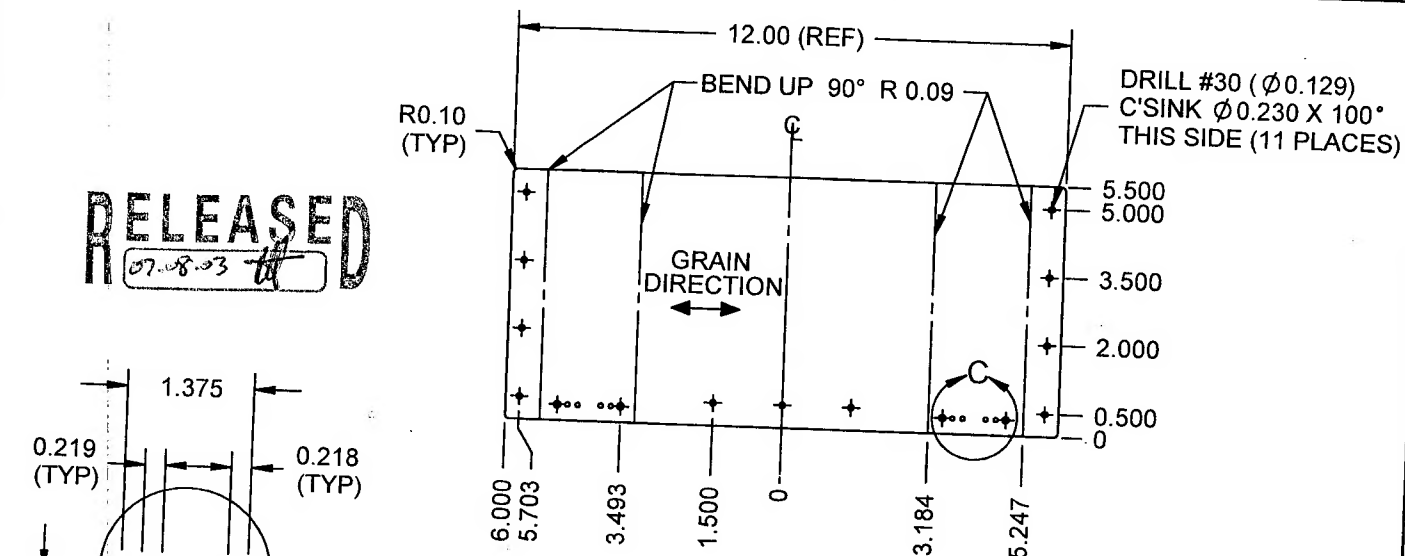
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



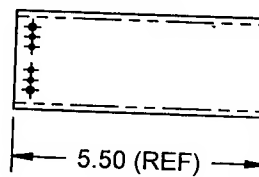
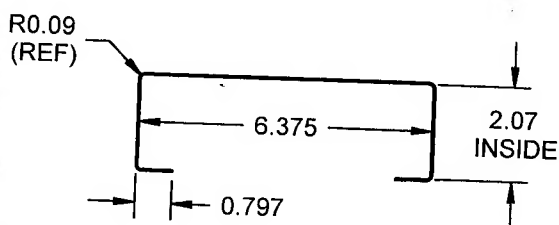
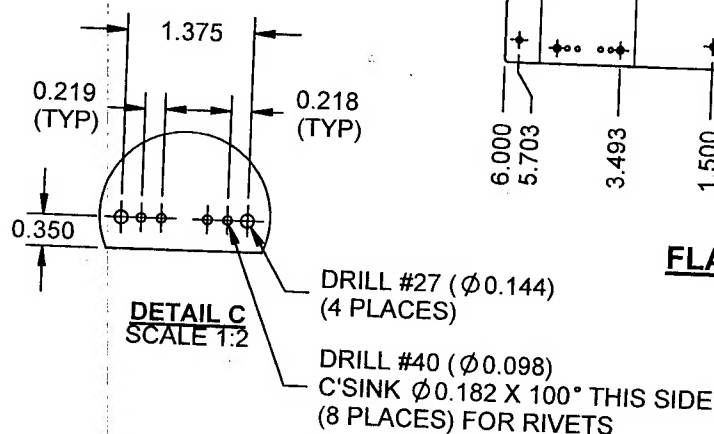
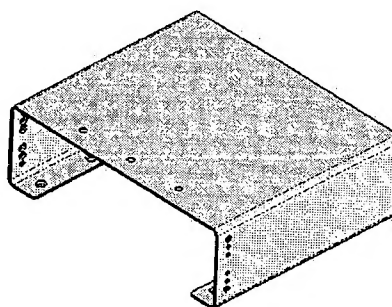


DESIGN <b>CB</b>	DRAWN BY <b>CB</b>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED <b>LE</b>	APPROVED <b>[Signature]</b>	DRAWING NO. <b>D3514</b>
DATE <b>07.06.18</b>	TITLE <b>GPS RECEIVER HOUSING</b>	REV. A SHEET 5 OF 9 SCALE 1:4

RELEASED  
07-08-03



**D3514-1F  
FLAT PATTERN**



**D3514-1 BOX TOP (BOTTOM MOUNTED)**

**NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT C
- 7) C'SINKS ARE ON THE INSIDE OF PART (AFTER BENDING)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

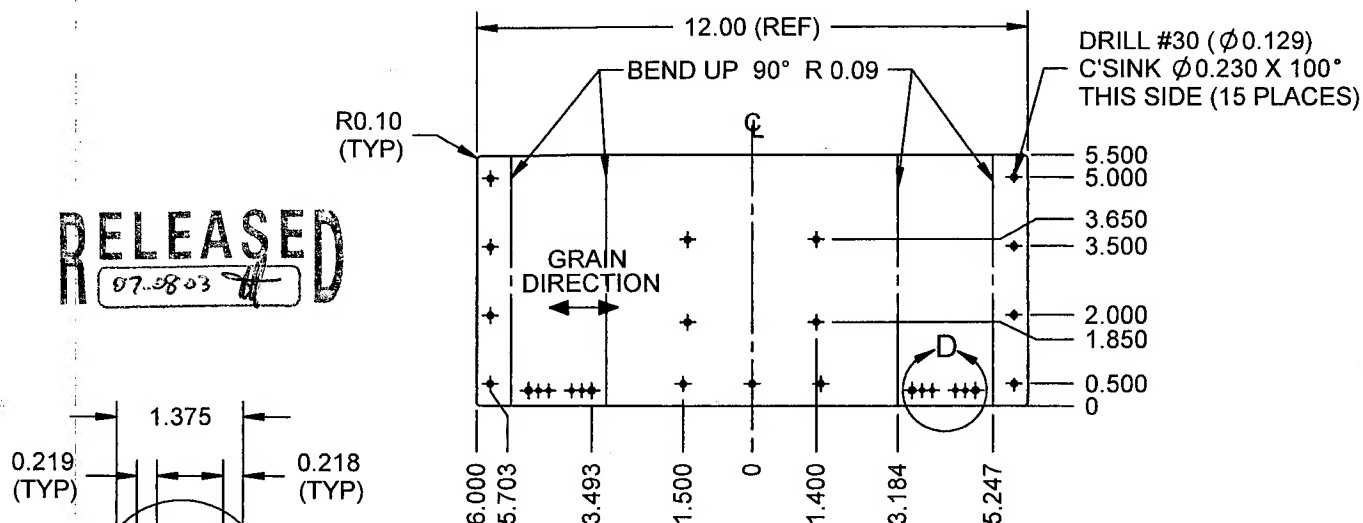
**COPYRIGHT © 2007 BY DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

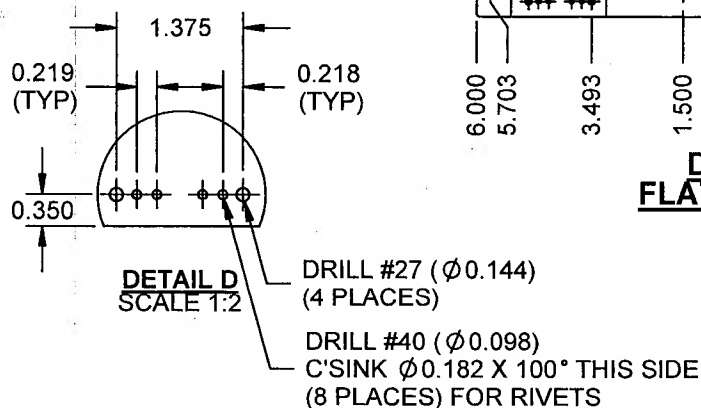


DESIGN CB	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED [Signature]	DRAWING NO. <b>D3514</b>	REV. A SHEET 6 OF 9
DATE 07.06.18		TITLE <b>GPS RECEIVER HOUSING</b>	SCALE 1:4

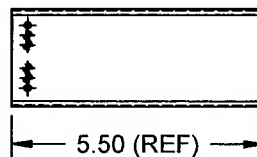
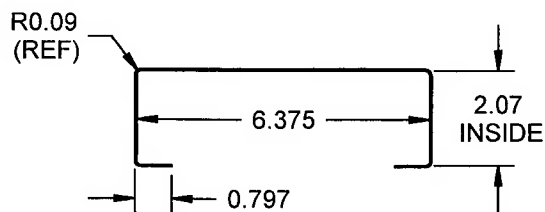
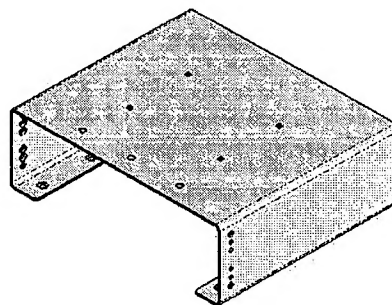
RELEASED  
07.08.03



**D3514-3F  
FLAT PATTERN**



**DETAIL D  
SCALE 1:2**



**D3514-3 BOX TOP (TOP MOUNTED)**

**NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT C
- 7) C'SINKS ARE ON THE INSIDE OF PART (AFTER BENDING)

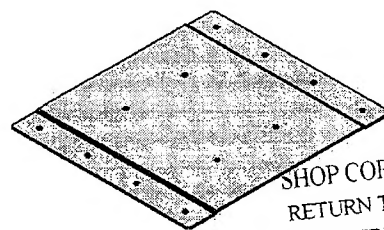
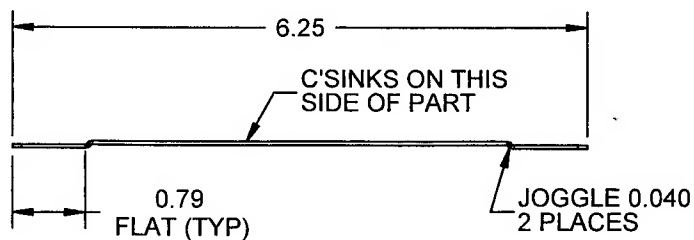
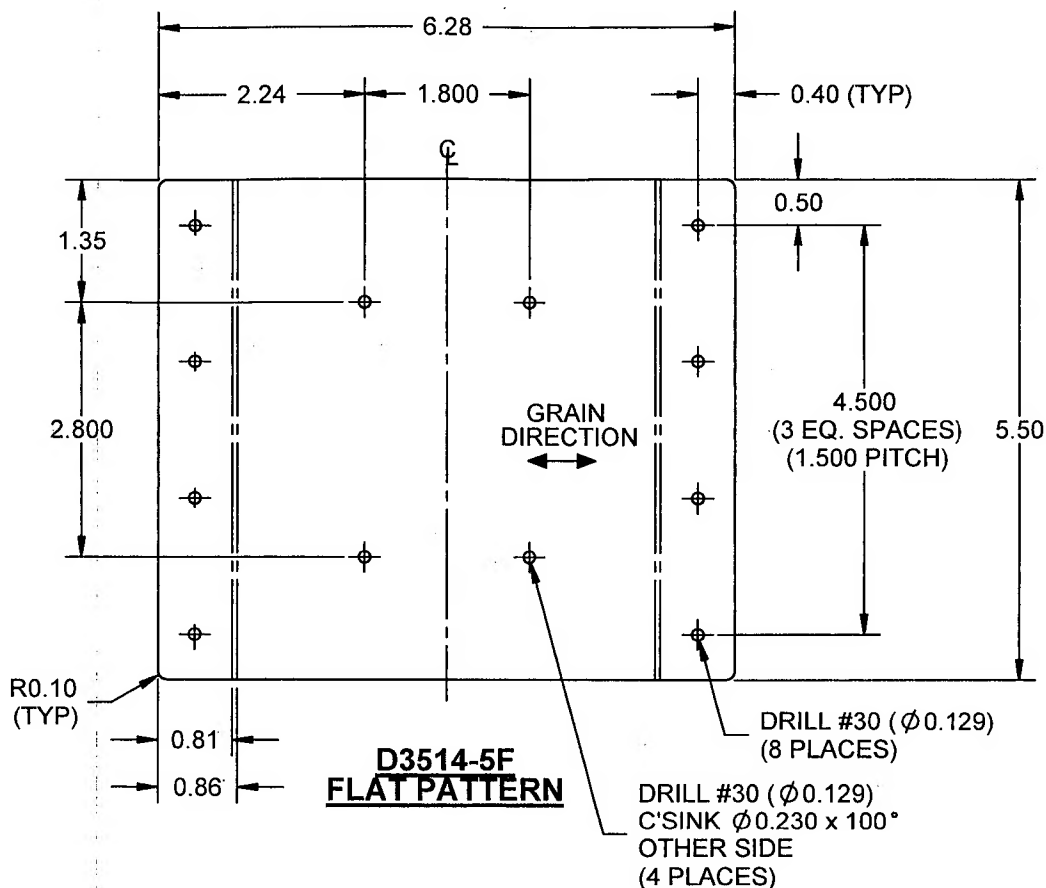
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**COPYRIGHT © 2007 BY DART AEROSPACE LTD**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED H	DRAWING NO. D3514	REV. A SHEET 7 OF 9
DATE 07.06.18		TITLE GPS RECEIVER HOUSING	SCALE 1:2



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT  $\phi$
- 7) C'SINK ABOVE JOGGLE

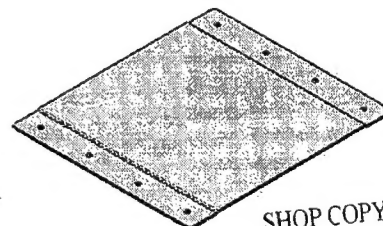
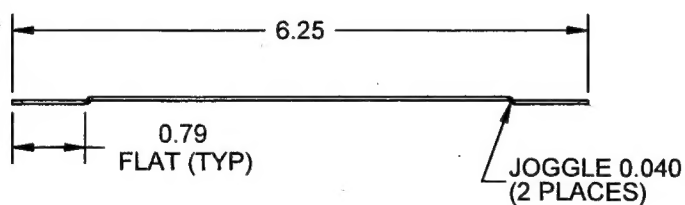
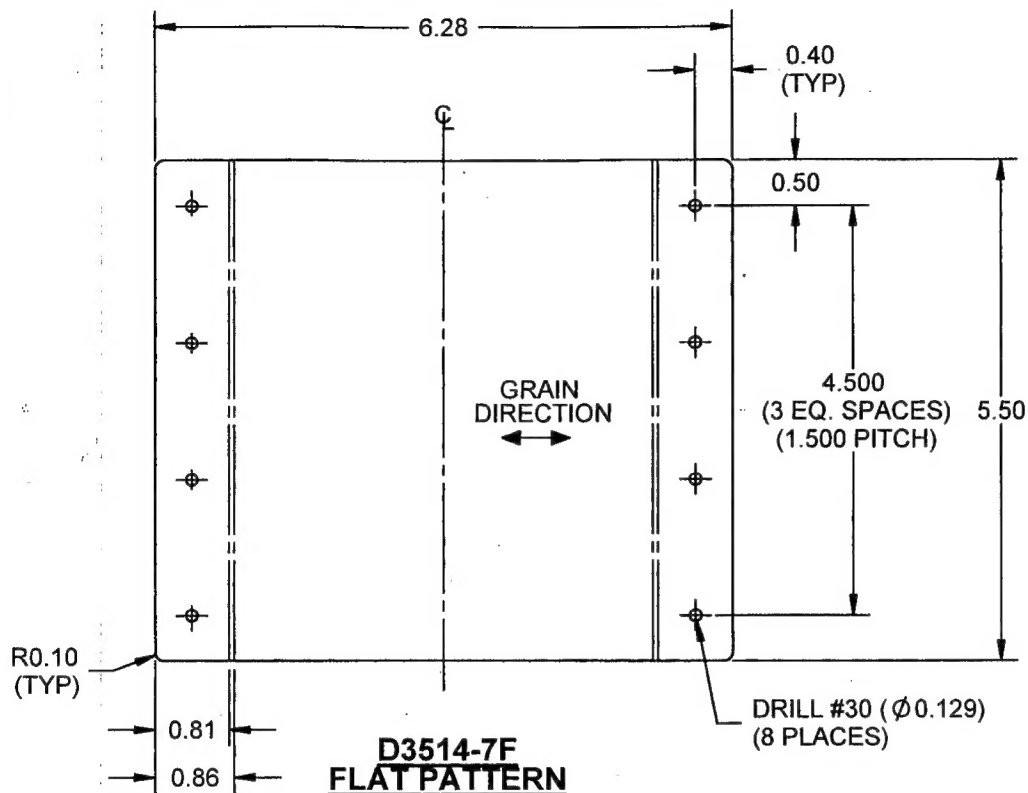
**RELEASED**  
07.08.03 H

COPYRIGHT © 2007 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN <b>CB</b>	DRAWN BY <b>CB</b>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
CHECKED <b>LE</b>	APPROVED <b>[Signature]</b>	DRAWING NO. <b>D3514</b>
DATE <b>07.06.18</b>	TITLE <b>GPS RECEIVER HOUSING</b>	REV. A SHEET 8 OF 9 SCALE 1:2



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. \_\_\_\_\_

**NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT C

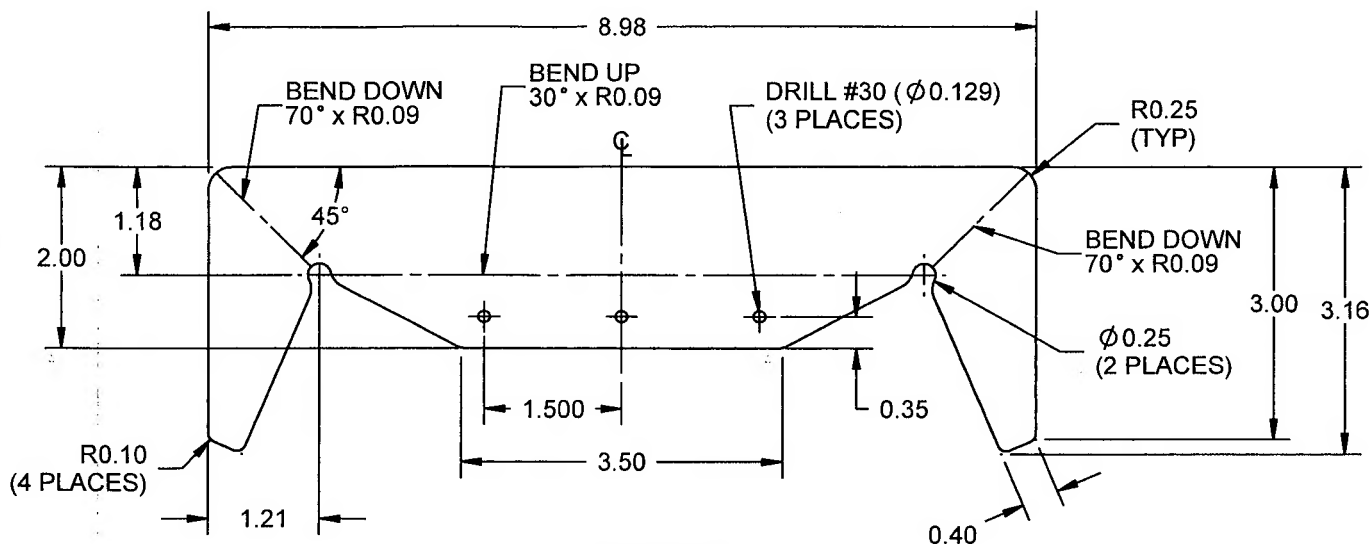
**RELEASED**  
07-08-03 [Signature]

**COPYRIGHT © 2007 BY DART AEROSPACE LTD**

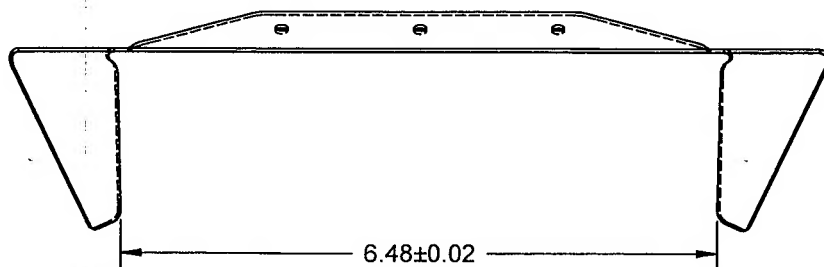
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



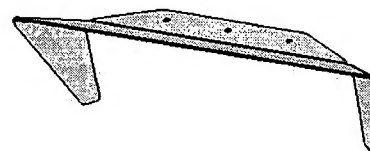
DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED LE	APPROVED 	DRAWING NO. D3514	REV. A SHEET 9 OF 9
DATE 07.06.18		TITLE GPS RECEIVER HOUSING	SCALE 1:2



**D3514-9F  
FLAT PATTERN**



**FRONT VIEW**



**D3514-9 HOOD**

**NOTES:**

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT CL

**RELEASED**  
07.08.03

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

COPYRIGHT © 2007 BY DART AEROSPACE LTD

NO. \_\_\_\_\_

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

